

Education Outreach

Education Office

(Education Supplement to Public Affairs Materials)

Many of the following suggestions may seem obvious, but it's always helpful to review them, especially if it's been a while since you last visited a classroom.

Since there are so many alternatives, the following assumptions are made in our training sessions and documentation:

- Teacher refers to the coordinating adult. This may be a teacher, a scout leader, a parent volunteer, etc...
- Classroom refers to the location. This may be a school classroom, auditorium, park gazebo, or any other location you may be going to.
- Students refers to the audience. They may be high school students, boy scouts, the science team, or other special interest groups.

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Introduction

Thank you for being a part of the Education Outreach Volunteer Team. This is a wonderful opportunity for you to share your experience as a NASA employee with students throughout our community and beyond.

Some of you will visit local schools, while others of you are will tutor or mentor. There are so many opportunities available for you to serve, and we appreciate your willingness to talk with students.

Education Outreach is a distinguished program that we are proud of and hope that you will be too. Thanks to excellent volunteers like you, Education Outreach is an exceptional program for students in the State of Texas and beyond!

Your Education Outreach Team

Survival Tips for Your Classroom Visit

Get Ready!



Before you go into the classroom...

Decide on your approach

You may select some aspect of the curriculum. An alternative, more personalized, approach is to focus on what you do.

Prepare your activity based on children's needs and abilities

Ask the teacher what students already know.

You can also check with the teacher about local curriculum and/or texts. Know the age of the class you are visiting and their "Thinking and Learning Characteristics" (listed below).

Consider including the following when creating your presentation:

- a. Discoveries
- b. Current information the audience cannot view or have access to any other way
- c. Career exploration – it's never too early to spark the imagination of these kids!

Be prepared for students' reactions and behavior

Keep in mind that teachers and parents may have concerns about how sensitive issues, such as evolution or reproduction, are presented to their children. If you have questions about appropriate ways to present your subject, discuss your plans with the teacher.

Know when and where you will be visiting

Verify the time, place, and length of the visit. Be sure to get phone numbers for the teacher and the school. If you don't know where the school and classroom are, ask for directions. If Education Outreach coordinated this visit for you, we will supply you with all of these details.

Look for additional resources

Local science centers, museums, libraries, your colleagues, and other sources may be able to provide hands-on teaching materials, films, live animals, activity kits, and other materials to use. Colleagues or your professional society may be able to give you good ideas for experiments and things to do. If you have children, ask them what they would like to know about what you do. You can also visit the list of suggested websites in the Resources section of this document.

Prepare questions

The students may have submitted or prepared some questions that will help you determine their knowledge level. You will want to prepare some questions to disperse within your presentation. They can be open-ended questions, basic questions, or though provoking questions that will probe the students' existing knowledge of that concept, subject, or topic and make them apply the new knowledge you have

shared. These questions need to be carefully phrased, since a vocabulary that may not be familiar to the students can obscure your assessment of how well they know the facts or concepts.

Get Set!



Assemble your notes and materials in advance

If each student is to have a handout or materials, make sure you have enough of each. See that materials are organized. Do a test run of experiments, games, or any other activities you plan to do.

Prepare to use terminology that is appropriate for the students

If there are a number of words or concepts students would benefit by knowing in advance, give them to the teacher to help students learn them.

Allow yourself enough time to get to the school and to find the classroom

Go!



Share yourself

Let the children know you are a real person with a family, pets, and hobbies. Talk about how you got to be a chemist, an anthropologist, an engineer... Was there a special event or person in your life-a teacher, a learning experience, a book, a visit to a museum- that aroused your interest in your field? What do you do on an average day? What is interesting or unique about your work?

Involve the students in doing.

Bring an attention grabber if you can. Keep in mind that your goal is to arouse curiosity, excitement, and eagerness to know more...you know, "Inspire the next generation of explorers...as only NASA can!" The tools of your profession may be commonplace to you, but they are mysterious, unknown, even fascinating to most of the students (and teachers) you meet. When possible, let students handle models, equipment, samples, plants, prisms, stethoscopes, rocks, or fossils.

Make the presentation as interactive as possible by:

- a. Engaging the students in an interactive dialogue
- b. Encouraging questions from the audience

- c. Involving the audience as early as possible (by asking a question within the first 5 minutes)
- d. Preparing challenging, age-appropriate questions for the audience in advance and "lecturing" for no more than 10 minutes without asking a question
- e. Including problem-solving group activities



Use effective questioning techniques

- a. When you are asked questions, ask questions of the participants to help them answer the question themselves
- b. When you are asked questions, ask if other members of the audience can answer the questions and "lead" them to the correct answers

Involve students in the process of science

Do a simple experiment in which the students participate. The process skills of science--observing, identifying, classifying, measuring--are the skills that enable students to apply science to everyday problems.

Stimulate thinking by asking questions

Questions that ask students to make a prediction, to give an explanation, to state an opinion, or to draw a conclusion are especially valuable. Be sure to allow time for each student to THINK before anyone gives answers.

Use language the students will understand

Be conscious of vocabulary. Try not to use a difficult word when a simple one will do. Define words students may not know. For example, don't say, "I am a cytologist" and begin a lecture on semi permeable cell walls. Rather, ask students if they know what a cell is and then tell them you study cells, how they are built, and how they act, and that you are called a cytologist.

Make what you are talking about real to the students

Show the students that the area of science or technology you work with every day is part of their everyday lives, too. How has what you and your colleagues have learned up to this time changed how we do things or understandings? How will what you do make the students' lives better or different in the future? How does what you do and know relate to what they are learning to in school?

Prepare the students for the unexpected, if appropriate

Unexpected loud noises, bright lights, unusual odors, graphic photographs, and similar experiences that evoke strong emotion or fright can disturb some children. It may be wise to warn students that a surprise or something unusual is coming even when evoking a degree of surprise is one part of your goal.

Leave more than a memory behind you

Help set up an experiment that students can continue after you leave. Invite them to write to you with questions-and plan on answering

Ask for an evaluation of your efforts

Ask the students what they liked (and didn't like) about your visit. Ask the teacher to critique your presentation and help you improve your in-class skills. Volunteers, students, and teachers will be asked to fill out an on-line evaluation form after they have finished their participation.

The evaluation form will ask for several pieces of information:

- Evaluation of the experience
- # of participants

Follow-up with Students

- You are encouraged to maintain e-mail relationships with any students or teachers who are interested.
- You are encouraged to direct teachers to other NASA educational opportunities.

Activities

Some of our most seasoned volunteers shared their suggestions for activities that you can use when you work with students. Whether you inspire one-on-one or with entire auditoriums, you have lots of tricks up your sleeve. These are some of our favorites:

"I bring an inflatable Earth beach ball and I have a student volunteer stand with it on one end of the classroom. Then I give another student a "moon rock" (bouncy ball found at Exchange store) (the beach ball to moon rock is about the right ratio of size difference). I ask that student to tell me how far away s/he thinks the moon would be from Earth (and they try to come real close), then, I let other students help him/her. As it turns out, the moon would be on the opposite corner of the classroom. Last time I went, I borrowed a space glove and space helmet from the Exhibits folks and I get another student volunteer (to be an astronaut!) and have them put on the helmet and glove (I have them pick a friend to guide them around) and I give them a Space Shuttle model and ask them how close to the earth does the space shuttle fly. They usually pick halfway between the earth and the moon. As it turns out, the right distance is about one centimeter off the surface of the beach ball. I then ask where they think Mars would be (the answer is 2 miles away!) -- usually I let the "Mars" volunteer start heading toward the door of the classroom before I stop them and tell them its too far for them to walk. Anyway, it works well because it gives them a good idea of the vastness of even the close stuff to us in space and it gets a lot of the class up and moving."

"I bring a "Toys in Space" video (I usually mute the sound). I fast forward to some of the more interesting parts. I ask the students to tell me what they think the astronauts do in space, and they all respond "Science, grow plants, look out the window.." so it surprises them when you tell them some of them play with toys (at this point, I show them a clip of the video). Anyway, I ask what games they would play and the students come up with all sorts of crazy ideas while I show them more of the video. It's a fun brainstorming exercise."

"When I have a larger group, I often use the available exhibit hardware to do a demonstration of the difficulties of working in microgravity. This activity requires (from PAO exhibits) the EVA Glove and works even better with the Apollo Lexan Helmet and Two-Piece Flight Suit. First, I ask for an audience volunteer and ask him/her to put on the jacket from the flight suit and the EVA glove. I then guide this person through a series of increasingly complex activities. I first ask him/her to pick up a quarter from the table using the EVA glove. Shows how relatively simple tasks can be more complex with a big spacesuit. Then, I have the volunteer don the EMU helmet to add a little more distraction and I hand the person a marker. I ask the volunteer to write his/her name on a piece of paper, but using ONLY the gloved hand (we can say the other hand would be used to hold onto a handrail to keep yourself from floating away!) The big catch is the marker is capped and I don't allow the volunteer to use his other hand to uncap the marker, so it requires some creativity. The easiest way is to squeeze the marker cap between your knees and pull. Finally, I bring a nut and bolt. I tell the students that being in space requires juggling a lot of things in your mind. Often, you're always floating away from where you want to be, and you have Houston calling in your headset and other crewmembers talking to you. It's like trying to work with everyone talking while wearing roller-skates. Of course we can't make our volunteer wear roller-skates (NASA Safety would have a fit!) but we can make the task a little more challenging by asking the person to unscrew the nut from the bolt while wearing the EVA glove, helmet and flight suit jacket AND Hula-hooping! I bought a hula-hoop just for this purpose when I give presentations, and the activity always gets a lot of laughs while offering the chance to discuss many challenges of microgravity and working in space. Of course, you need to pick a volunteer who's a good sport which requires a certain degree of intuition, but I've had great luck with it so far!"

"I used this successfully with an auditorium of families this year. I had a cup with a hole in it. I put water in the cup and everyone could see it come out of the hole in the bottom, into a bucket. Then I had someone from the audience come up and hold the cup with water and drop it from the stage onto the floor, about 10 feet below. When the cup is dropping, the water stops coming out because the cup is

dropping at the same rate. Then I compared this to being on Shuttle or Station, where the water does not run out for the same reasons. Oh, and the real hit of my presentations is using the exhibits from PAO, the helmet and the food.”

“These are a few of the ideas I have employed:

- Alka-Seltzer Rockets - Demonstrates Newton’s Laws of Motion - Grades 5-9. It’s in the Rocket’s Teacher Guide on page 57 at <http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Rockets.html>
- Bag of Bones (Virtual Astronaut) - Demonstrates bone density reduction (Students must find percentages) - Grades 4-6
- Astronaut Helmet, Shuttle Mockup, EVA glove and trays of foods are good "show and tell" items. They generate lots of questions.”

“Space food is a popular topic. I like to do the rehydratable food experiment from the Space Food Educator’s Guide (It’s no longer in print. The Education Office has a copy). It’s easy to do in the classroom and it works for younger and older students.”

“I like to use lots of display items, artifacts, etc on the stage or desk when I speak. For example:

- The planets - 4 ft Earth, 2 ft Mars and 1 ft moon are in scale
- I use a 100 ft EVA lifeline to demonstrate how far the moon would appear from the earth in this scale.
- The Saturn and Jupiter are in scale with a 1 inch Earth I keep in my pocket
- The X-1, X-15, Spaceship 1, Mercury, Gemini and Apollo are in scale. Several items are available from JSC-AP (Shuttle, ISS, Spacesuit)
- Many of the items are paper models that I download from the NASA portal web site (http://www.nasa.gov/pdf/58321main_X1Glider1b.pdf) and build: X-1, X-15, Spaceship 1, Mercury, Gemini, Shuttle, Mars globe.”

“The 3-2-1 Pop! film canister rockets (Education Outreach Office has film canisters for you to use) seltzer rocket activity is great and a big hit. It’s in the Rocket’s Teacher Guide on page 53 at <http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Rockets.html>. There are 12 other good activities in this booklet as well, such as the Seltzer Race.”

“No matter what topic I’m going to talk about (space food, space suits, mars, etc), I can always find an activity in the teacher’s guide for that topic on the NASA portal at (http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/By_Type_Guides_landingpage.html).”

Some of your favorite websites for activities:

- 1) NASA Educational Materials by Subject: <http://www.nasa.gov/audience/foreducators/topnav/materials/listbysubject/index.html>
- 2) Astroventure: <http://astroventure.arc.nasa.gov/teachers/teach.html>
- 3) NASA Portal for Education: <http://education.nasa.gov/home/index.html>

Resources

Visual Aids

Want your next presentation to come alive with exciting NASA audio and video? The Multimedia Jukebox can help. This unique search-and-burn tool allows JSC users to search for video clips, audio clips or images and then burn them onto CD’s or VHS tapes in any order-perfect for using the clips in a presentation without having to skip or rewind anything. -

<http://www1.jsc.nasa.gov/paointernal/prodserv/videos/index.html>

PAO maintains PowerPoint templates that JSC employees can use for their own presentations. In limited cases, the Communications Office can assist in the building of the presentation itself. -

http://www1.jsc.nasa.gov/paointernal/prodserv/speaker_support.html

Videos: Check them out online and have them ready for pickup or delivery at:

<http://education.jsc.nasa.gov/volunteer/resources.cfm#video>

Slide Sets - <http://education.jsc.nasa.gov/volunteer/resources.cfm#slids>

Print Products

The ISC is a one-stop shop for ready-made print products such as crew photos, educational packets, posters and lithographs. These products, available for request by the general public as well as JSC employees, can be useful as handouts for presentations. The materials on hand are always changing, so stop by once in a while and see what's new! - <http://www1.jsc.nasa.gov/paointernal/prodserv/print.html>

Exhibits

Looking for a way to bring NASA and JSC alive for a presentation? Look no further. JSC maintains a traveling exhibits inventory of over 200 artifacts and displays for public use. Check the most popular out directly from the Education Website at: <http://education.jsc.nasa.gov/volunteer/exhibits.cfm> or <http://www1.jsc.nasa.gov/paointernal/prodserv/exhibits.html> or <http://education.jsc.nasa.gov/volunteer/exhibits.cfm>

Websites

Educator Resource Center (ERC) - http://www.spacecenter.org/educator_resource.html

NASA Daily News Digest – <http://64.239.47.23/nasa/>

NASA Portal for Educators – <http://www.nasa.gov/audience/foreducators/>

NASA Portal for Students – <http://www.nasa.gov/audience/forstudents/>

National Public School and School District Locator - <http://nces.ed.gov/ccd/>

Texas Space Grant Consortium - <http://www.tsgc.utexas.edu/>

Presentation Do's and Don'ts

- Be prepared; have an agenda
- Know how to use equipment
- If you use overhead transparencies, be sure they are readable
- Set a tone of politeness and enthusiasm from the start; let students know there will be time for their questions
- Engage students in the presentation or activities early to dissipate unwanted behavior
- Involve “uninvolved” students if possible by having them assist you
- Don't single out a disruptive student; walk over and stand beside or behind him/her and continue with your lesson

- Be enthusiastic
- Establish a rapport with the students
- Don't play favorites; treat everyone equally
- Use positive reinforcement as response to students' questions
- Know your goals and objectives
- Leave plenty of time for questions and discussion
- Be sure to include transitions and closure to activities
- Have fun!



Helpful Hints

Meet With Teacher:

- Tell teacher the subject of your talk
- Can you have free set up time? Ask for 5-10 minutes set up time without students in room.
- Who is your audience? Gifted, Resource, Non-English Speakers, Emotionally Disturbed, Attention Deficit
- How many students will there be?
- What equipment will you need and where in the room do you want it placed?
- Do you want students to have prior knowledge? Send an outline of your talk before you arrive.
- Ask teacher to stay in the room to help with discipline and for assessment later.

Before Presentation

- Make sure you have communicated with the teacher.
- Get all materials together.
- Try out experiments.
- What are your objectives? How will you state them?
- How will you begin? (Tell about yourself at that age.)
- How will you balance “giving” information with allowing students to experience the activities?
- How will you allow students to interact with each other? To share ideas?
- How many activities should you plan in a given time frame?
- How will you keep your students focused?

Day of Presentation:

- Sign in at school office.
- Set up equipment in room.



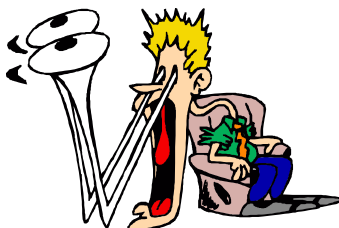
- Greet students with a smile.
- Set the tone. You are in charge. Explain to students how they will interact with the presentation.
- Either leave time for questions (not comments) at the end, or allow students to share and ask questions during the presentation.
- Tell something (funny, if possible) you remember about yourself at that grade.
- Don't read. Talk from notes or memory.
- Have a focus—object, picture.
- Have a handout or write vocabulary you will use on board. Explain.

- Don't play a long video. Students have the exclusive opportunity to spend time interacting with you, not a TV.
- Remember—timing is important. Schools have rigid schedules.
- If discipline is a problem, defer to teacher. You are only a guest.
- Explain any hands-on activity before handling out anything.
- If groups are needed for activity, no more than four students per group.

Ending the Presentation:

- How will you close? Don't just stop.
- How will you allow questions? Hands raised, etc.?
- What will you do if you get a question you can't answer?
- How will you evaluate the presentation?
- Will you leave an address for students to write you if they have further questions?

Teaching Tips



Make eye contact with the students because they love the personal contact.

Smile and feel comfortable telling amusing anecdotes because kids love a good laugh.

Organize all material in advance because kids sometimes have a hard time waiting.

Use student volunteers to help you set up and distribute materials, samples, pictures, and handouts because kids love to feel important.

Require that students raise their hands to participate because they will probably all want to talk at once.

Call on many different members of the class because everyone wants to be involved.

Model good safety practices because kids learn by following role models.

Give specific directions when distributing specimens because kids sometimes disagree about who has been holding an object the longest.

Use a prearranged signal to get students' attention during activities (clapping, flipping light switch, etc.) because it is too hard to give good directions unless students are quiet.

Stop and wait for students to let you continue speaking if they get noisy because they have probably heard the "cold silence" before and know that it means they need to be less noisy.

Wait to give handouts to students until it is time to read or use them because if the students have the handouts while you are speaking they will be distracted.



Wait several seconds before calling on students to answer a question because the whole class needs time to think about the question before someone answers it.

Praise attentive or helpful behavior because this is the behavior you want to encourage.



Enjoy the students, their enthusiasm, and their sense of wonder because they have a fascinating perspective on the world!

Working Effectively with Students

- Learning styles & cognitive levels
- Planning & preparing successful activities
- Presenting your activity
- Evaluating & extending
- Students learn to fear science in early school years

Working Effectively with Teachers

- Things you should know about teachers
- Ways you can help
- Getting started & interacting effectively
- Coordinating with the teacher

Typical Science and Technology Topics

- Gives you a general understanding of what students typically learn at different grades.
- You can also check with the teacher about local curriculum and/or texts.

Thinking and Learning Characteristics

Lab activities enhance student performance in:

- Process skills: observing, measuring, manipulating physical objects
- Analytical skills: reasoning, deduction, critical thinking
- Communication skills: organizing information, writing
- Conceptualization of scientific phenomena

Elementary Levels

- Activities should be selected that allow students to discover and construct science concepts
- Minimum of 50% of the science curriculum should be hands-on
- Safety precautions must be in place

Middle Level

- Minimum of 40% of the science instruction should be spent on laboratory-related experience.

Professional Conduct

As you will be working with minors, there are guidelines that must be established. Please know that we don't expect that there will be any unprofessional behavior, but we must make sure that everyone is aware of the guidelines.

- No use of profanity or discussion of inappropriate topics
- No drinking alcohol
- Be aware of comments or actions that could be considered sexual harassment.
- Do not be alone with students - this protects each party.

Other points to remember

- Confidentiality - do not discuss information you are exposed to in the CCISD school district. If you feel there is an issue at hand, immediately contact the Education Outreach team: x38712
- Any pictures or publicized material requires parental consent.
- Enjoy the program. Have fun!
- If problems arise, talk to your Education Outreach team, that's what we're here for!
- Use the support network.
- Remember, management supports you. This is NASA's mission! "Inspiring the next generation of explorers...as only NASA can!"

Safety in the Classroom

If you are demonstrating an activity that has potential safety hazards, take all of the appropriate precautions, including informing the teacher beforehand.

Contact Information

Education Outreach Coordinator
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Houston, TX 77058

Tips for Tutors

Tutoring is essentially an individual experience. In this relationship, there is no one method, no easy answer. The most success will be found with methods that you develop yourself while working with the student. Tutoring tips presented here summarize suggestions which other tutors have found helpful. They are intended to serve as a guide.

Purposes of Tutoring

1. To better the student's picture of himself/herself.
2. To serve as a role model and to motivate students.
3. To give the student confidence in making and achieving realistic academic goals.
4. To improve the educational achievement of the student.

Commitment

Tutoring needs a commitment. The student needs to know what to expect. Try to be consistent throughout the program. Call the school secretary or the teacher if you will not be there. Tutees are very disappointed when their tutors do not show up.

Tips for Establishing Rapport

1. Relax and be yourself. Students are quick to see any pretensions.
2. Personal concern for your tutee is one of your greatest assets as a tutor. Work to build a relationship of mutual confidence.
3. Be sure that you and your tutee have names straight. Learn nicknames, if any. Write down your name and give it to the tutee. Students are often hesitant to communicate with tutors when they are uncertain of names.
4. Ask the teacher to furnish you with background information on your tutee and indicated areas of weakness or instruction.
5. Begin tutoring at a level well within the grasp of the tutee to provide an atmosphere of success. Many tutees need a rewarding experience to restore their self-confidence.
6. Indicate immediately when the student's answers are right or wrong. Let him know you are pleased with a right answer. If he/she is wrong, do not show disapproval but look at the mistake as a challenge.
7. Complete a Campus Daily Log and return it to the student's teacher to keep him/her apprised of the student's progress.
8. In general, the less work you do for your tutee, the better. Although it is quicker, easier, and less frustrating for a tutor to do a problem or an assignment, it is of little permanent help to the student. Help the student learn how to do his/her own work. When you supply an answer, be sure your tutee understands how you arrive at it. If you are not sure that he/she does, test your tutee with a similar example.
9. Once you feel the tutoring is going well, don't be guilty of underexpectation. If you expect little from your tutee, he will produce little. Let him know you have high expectations of him. With this encouragement, he may come to have the same high expectations of himself.
10. To the extent possible, be creative and imaginative in your tutoring methods. Look for ways to motivate your tutee and to involve him/her in activity.
11. Be sensitive to the existence of emotional or psychological problems that may be affecting the performance of the young person. Problems beyond your competence should be brought to the attention of the teacher.
12. Resist the temptation to criticize the schools as a means of identifying with the tutee. The tutor should attempt to improve the tutee's ability to learn from teachers and schools. If the tutor has questions regarding the school's instructional program, its policies and procedures, it is recommended that he contact the principal or the teacher.
13. Don't expect your tutee to show appreciation for your efforts. He/she may be grateful but not know enough to say so. The student may not realize for a few years what you have done for him/her.
14. Don't be quick to judge. Many of the students who are tutees have lived a life of finding themselves judged according to stereotypes of character, ability, and intelligence. Avoid

perpetuating this pattern. Many of the characteristics that make your tutee different from you are what make him/her an individual. Viewed this way, his/her differences often appear as strengths.

One way to avoid a patronizing tone is to relate to your tutee as an equal. Do this in the sense that you and he are human beings with problems and a future to face. Think of working with your tutee rather than talking at him.

99 Ways to Say "VERY GOOD"

You're on the right track now!
You've got it made.
SUPER!
That's right!
That's good.
You're really working hard today.
You are very good at that.
That's coming along nicely.
GOOD WORK!
I'm happy to see you working
like that.
That's much, much better!
Exactly right.
I'm proud of the way you worked
today.
You're doing that much better today.
You've just about got it.
That's the best you've ever done.
You're doing a good job.
THAT'S IT!
Now you've figured it out.
That's quite an improvement.
GREAT!
I knew you could do it.
Congratulations!
Not bad.
Keep working on it.
You're improving.
Now you have it!
You are learning fast.
Good for you!
Couldn't have done it better myself.
Aren't you proud of yourself?
One more time and you'll have it.
You really make my job fun.
That's the right way to do it.
You're getting better every day.
You did it that time!
That's not half bad.
Nice going.
You haven't missed a thing!
WOW!
That's the way!
Keep up the good work.
TERRIFIC!
Nothing can stop you now.
That's the way to do it.
SENSATIONAL!
You've got your brain in gear today.
That's better.
That was first class work.
EXCELLENT!

That's the best ever.
You've just about mastered it.
PERFECT!
That's better than ever.
Much better!
WONDERFUL!
You must have been practicing.
You did that very well.
FINE!
Nice going.
You're really going to town.
OUTSTANDING!
FANTASTIC!
TREMENDOUS!
That's how to handle that.
Now that's what I call a fine job.
That's great.
Right on!
You're really improving.
You're doing beautifully!
SUPERB!
Good remembering.
You've got that down pat.
You certainly did well today.
Keep it up!
Congratulations. You got it right!
You did a lot of work today.
Well look at you go.
That's it.
I'm very proud of you.
MARVELOUS!
I like that.
Way to go!
Now you have the hang of it.
You're doing fine!
Good thinking.
You are really learning a lot.
Good going.
I've never seen anyone do it better.
Keep on trying.
You outdid yourself today!
Good for you!
I think you've got it now.
That's a good (boy/girl).
Good job, (person's name).
You figured that out fast.
You remembered!
That's really nice.
That kind of work makes me happy.
It's such a pleasure to teach when you
work like that!
I think you're doing the right thing.

Volunteer Checklist (for the “checklist” types)

1 Week Prior (or additional time as required)	
	Review teacher's goals & objectives & tailor your presentation.
	Contact teacher regarding questions, pre-work, exact goals & objectives, etc.
	Make sure you know when & where you will be visiting.
	Establish your goals & objectives
	Look for additional resources
	Prepare your presentation
	Review student's questions & research answers (if applicable)
	Review current events related to NASA http://64.239.47.23/nasa/
	Look up location on tracking map to see if ISS/Shuttle will fly over the students any time soon: http://spaceflight.nasa.gov/realdata/sightings/index.html

1 hour prior (or as necessary)	
	Allow yourself enough time to get to the school and to find the classroom
	Sign in at the school office

30 Minutes Prior (or as necessary)	
	Gather & set-up props (if applicable)
	Restroom break
	Get water
	Place cell/pager on vibrate

5-10 Minutes Prior	
	Turn equipment on to make sure it works.
	Gather statistics (# of participants & grade breakdown) to use for your feedback form.

POST EVENT

	Clean up your presentation area.
	Debrief with Teacher.
	Help us improve our volunteer program by giving us feedback: Log in at http://education.jsc.nasa.gov/internal/volunteer/vol_sign_in.cfm & click Rate Us.
	Respond to student's questions that were not answered during the event.
	Civil Servants can charge your time to the Education Labor Code.
	Relay suggested changes or additions to the Education Outreach Office.

FAQs

(also available online at: <http://education.jsc.nasa.gov/internal/volunteer/faqs.cfm>)

GETTING STARTED

1) Who can volunteer?

- i) Part-time and full-time civil servants, and contractors, both on and off site.
 - (1) *Civil Servant Policy*: Time spent participating in an approved Education Outreach Program activity is official duty time. Civil Service employees may charge up to 8 hours per pay period for Educational Outreach Activities to their regular charge code with a signed Supervisor Approval Form on file. If the hours extend beyond the 8 hours per pay period, you can charge to a special education labor code.
 - (2) *Contractor Policy*: Please contact your supervisor for your company's policy.

2) How do I sign up to volunteer? Please visit our Register to Volunteer page at

<http://education.jsc.nasa.gov/internal/volunteer/volRgstr.cfm>.

3) How can I find out about current volunteer opportunities? Where do you need the most help? Please visit our Search page at

<http://education.jsc.nasa.gov/internal/volunteer/searchProgs.cfm> to see a list of current opportunities.

4) What programs can I volunteer for? How can I find out more about a specific program?

- i) To see a complete list of Programs, visit our web page at <http://education.jsc.nasa.gov/>.
- ii) To see a list of opportunities outside of the Education Office, please visit the web page at <http://education.jsc.nasa.gov/internal/volunteer/outreach.cfm>

5) I'm not a scientist or an engineer, can I still volunteer? Absolutely. We need volunteers for a variety of topics as well as support with program administration.

6) What's the difference between Community Outreach (i.e. Speaker's Bureau) vs. Education Outreach?

- Education Outreach Programs typically "train" students directly or indirectly through tutoring, lecturing, curriculum development, on-the-job work experiences, etc.
- Community Outreach Programs, like the Speaker's Bureau, typically promote public goodwill, visibility, & advocacy for NASA JSC, its employees, & the professions in the JSC workforce.

TIMEKEEPING

7) Where do I charge my time?

- i) Civil Service employees may charge up to 8 hours per pay period for Educational Outreach Activities to their regular charge code with a signed Supervisor Approval Form on file. If the hours extend beyond the 8 hours per pay period, you can charge to a special education labor code.
 - (1) If the event occurs during normal duty hours, please get permission from your supervisor prior to volunteering (a Supervisory Approval Form is required)

- (2) If the event occurs outside of normal duty hours, the hours are considered volunteer time and cannot be charged to the Education Labor Code.
- 8) **Which charge code do I use?** Civil Service employees may charge up to 8 hours per pay period for Educational Outreach Activities to their regular charge code with a signed Supervisor Approval Form on file. If the hours extend beyond the 8 hours per pay period, you can charge to a special education labor code that you will receive via e-mail when you sign up for the education outreach event.
- 9) **Where do I get a Supervisor Approval Form (SAF)?** You will receive the SAF via e-mail after you sign up for an education outreach event online.
- 10) **How many hours can I charge per year?** You may charge up to 40 hours to the special education labor code every year and up to 8 hours each pay period to your regular charge code.
- 11) **Do I get paid for evening or weekend volunteer hours?** No. However, we applaud your efforts to volunteer in such a meaningful way on your own time. We ask that you record the hours on your timesheet using the special education labor code and indicating that they are volunteer (not regular) hours so that we can capture the full extent of volunteer activity happening at JSC, but it's not a requirement.
- 12) **How do I add the charge code to WebTADS?** Go to the Add Projects Section, select the the code from the WBS box, select hour type, then select the <Add Project> button.
- 13) **Once I have the code, can I charge to it for other volunteer events?** If our office recruited you, then you will likely use the same code, however the code does change from year-to-year. If someone else recruited you, like Space Grant or someone else here on site, that's fine too, but we ask that you charge to the same code you use for the rest of your work.

PROCESS

- 14) **How do I sign up to volunteer?** Please visit our Register to Volunteer page at <http://education.jsc.nasa.gov/internal/volunteer/volRgstr.cfm>.
- 15) **How much time does it take?** That depends. Each event has it's own time requirement. You will be told up-front about the time commitment required for your specific event so that you can prepare accordingly.
- 16) **How do I find out if I've been selected?** We will notify you via e-mail when you are confirmed to volunteer for the event and send you all of the details.
- 17) **What do I wear?** You are representing NASA, so use your best judgment. Unless specific dress is requested, business casual is best.

18) **When am I supposed to show up?** Each event will have it's own timeline. In general, it is a good idea to show up at least 30 minutes before your volunteer opportunity is to start so that you can orient yourself and make any last minute preparations and introductions.

19) **How do I give you feedback?** Please help us improve our volunteer program by giving us feedback:

- Log in at http://education.jsc.nasa.gov/internal/volunteer/vol_sign_in.cfm and visit our Rate Us web page or
- Call us at (281) 483-8712 or
- Email us at EduOutre@ems.jsc.nasa.gov

TRAINING & RESOURCES

20) **Do I need training before I can volunteer?** No training is required, but help is available (see #14 below).

21) **Is there training available for a first-time volunteer?** We will offer a training class periodically in the Teague Auditorium. Our next date is Wednesday, March 9th. Check our web site for more details and future dates. There are a variety of resources available for you to prepare for your volunteer event (see #15 below).

22) **What resources do I have available to help me prepare?**

- For a complete list, visit http://www1.jsc.nasa.gov/paointernal/prodserv/speaker_support.html
- Websites with additional, resources that you might find helpful are:
<http://www1.jsc.nasa.gov/paointernal/prodserv> &
<http://education.jsc.nasa.gov/volunteer/resources.cfm> &
<http://education.jsc.nasa.gov/volunteer/exhibits.cfm>

23) **Do I have to supply my own materials?** If there is something specific that you want to show or talk about, bring it with you. You can also check out the variety of resources available for you listed in question #15 above.

24) **Are there any guidelines as to what I'm supposed to say?** Not specifically, however, you are officially representing NASA & if your topic is of a sensitive nature, or if you are unsure, please check with your Supervisor or the Public Affairs office (281) 483-5111.

25) **What if someone asks a question I can't answer?** It's okay to say "I don't know the answer to your question." You may wish to research the answer & follow up at your discretion.

AND THE REST...

26) **Where can I find more information?** <http://education.jsc.nasa.gov/outreach>

27) **Who can I call if I still have questions?** Call us at (281) 483-8712 or email us at EduOutre@ems.jsc.nasa.gov

28) **Can I volunteer for the same events I've helped with in the past?** Absolutely.

- 29) **Can I volunteer for more than one program & how often?** Yes, as often as you would like, provided it does not interfere with your workload.
- 30) **If I know of a school that would like to request to a NASA Engineer, Scientist or Astronaut, whom do I refer them to?** Ask them to visit our [Request a NASA Volunteer](http://education.jsc.nasa.gov/app/request.cfm) web page at <http://education.jsc.nasa.gov/app/request.cfm>
- 31) **How can a teacher request volunteer services?** Ask them to visit our [Request a NASA Volunteer](http://education.jsc.nasa.gov/app/request.cfm) web page at <http://education.jsc.nasa.gov/app/request.cfm>
- 32) **I have some great ideas for volunteer opportunities, who can I talk to about them?** Great! Please call us at (281) 483-8712 or email us at EduOutre@ems.jsc.nasa.gov
- 33) **How do I update my volunteer profile?** Log In at http://education.jsc.nasa.gov/internal/volunteer/vol_sign_in.cfm and click on the Edit Profile hyperlink at any time.